

WHAT IS CLAIMED IS:

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5 1. A plasma display panel of AC type including a front panel provided with display electrodes and a rear panel provided with address electrodes, for displaying an image by causing discharge in the discharge gas space formed between the front and rear panels;

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10 wherein the display panel is provided with a protective film made of metallic oxide covering the dielectric layer placed on the front panel;

15 wherein the protective film is formed into a structure where columnar structures are densely packed, closely with each other, extending perpendicularly to the interface between the dielectric layer and the protective film; and more than 400 columnar structures are formed per the substrate area of  $1 \mu\text{m}^2$  MgO crystal forming

2. A plasma display panel according to Claim 1, wherein the number of the columnar structures formed per the substrate area of  $1 \mu\text{m}^2$  is more than 500.

20 3. A plasma display panel according to Claim 1, wherein the columnar structures are formed into a series of crystal structures from the interface with the substrate to the film

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25 4. A plasma display panel according to Claim 1, wherein the metallic oxide is magnesium oxide

5. A plasma display panel according to Claim 1, wherein the film thickness to be formed as the protective film is less than 300 nm

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6. A plasma display panel according to Claim 1, wherein the film to be formed as the protective film is structured with one or more crystal axes, selected among a group of  $\langle 111 \rangle$ ,  $\langle 220 \rangle$ ,  $\langle 100 \rangle$  and  $\langle 311 \rangle$ , along the normal on the substrate surface.

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